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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,247	12/31/2003	Masahiro Yamanaka	SIC-02-009-3	3824
29863	7590	02/06/2006	EXAMINER	LUONG, VINH
DELAND LAW OFFICE P.O. BOX 69 KLAMATH RIVER, CA 96050-0069			ART UNIT	PAPER NUMBER
			3682	
DATE MAILED: 02/06/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/751,247	YAMANAKA, MASAHIRO
	<b>Examiner</b>	<b>Art Unit</b>
	Vinh T. Luong	3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on \_\_\_\_\_.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 22-30 and 35-37 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 22-30 and 35-37 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 28 June 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.



Vinh T. Luong  
Primary Examiner

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: Attachments 1 & 2.

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 21, 2005 has been entered.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 22-30 and 35-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear whether Applicant claims a tool *per se*, or a combination of a tool and a bicycle crank axle bolt/an axle bolt.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 22-24, 26-28, and 35-37, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Fultz (US Patent No. 5,445,483).

Assuming *arguendo* that Applicant claims a tool *per se*:

Regarding claim 22, Fultz teaches a tool 20 for a bicycle crank axle bolt comprising:

a tool body 30;

a plurality of splines 35 evenly circumferentially disposed on and extending radially outwardly from the tool body 30; and

a tool operating member 33 (Fig. 2) projecting radially outwardly from the tool body 30, wherein the tool operating member 33 is axially thinner than the tool body 30; wherein rotation of the tool operating member 33 rotates the plurality of splines 35 on the tool body 30.

Claim 22 and other claims below are anticipated by Futz because Futz teaches each and every positively claimed element. On the one hand, referring the tool to the merely inferentially included elements or intended use elements such as the (bicycle crank) axle bolt is not accorded patentable weight. It is well settled that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). In the instant case, Fultz's tool 20 is capable of engaging the corresponding plurality of splines disposed on the bicycle crank axle bolt by engaging the splines 35 with corresponding splines of the axle bolt as seen in Nagano'149.

On the other hand, the functional limitations of applicant's claims are not given patentable weight when those limitations are inherent in the Futz reference. See *In re Schreiber*, 44 USPQ2d 1429 (CAFC 1997)(A reference may be from an entirely different field of endeavor than that of the claimed invention or may be directed to an entirely different problem from the one addressed by the inventor, yet the reference will still anticipate if it explicitly or inherently discloses every limitation recited in the claims). In this case, since Fultz's tool is capable of

performing Applicant's functional statements by engaging with the bicycle crank bolt having corresponding splines, therefore, Applicant's claims are anticipated by Futz.

Regarding claim 23, the tool operating member 33 has a disk shape.

Regarding claim 24, the tool body 30 extends from a side surface (see Attachment 1) of the tool operating member 33.

Regarding claim 26, the tool operating member 33 includes a gripping rim (at 33 in Fig.

4. See Att. 1) extending from a side surface thereof.

Regarding claim 27, the gripping rim 33 is disposed at a radially outermost portion of the tool operating member 33.

Regarding claim 28, the tool body 30 extends from a first side surface (Att. 1) of the tool operating member 33, and wherein the gripping rim 33 extends from an opposite second side surface (Att. 1) of the tool operating member 33.

Regarding claim 35, Fultz teaches a tool 20 for a bicycle crank axle bolt comprising: a tool body 30; a plurality of splines 35 circumferentially disposed on and extending radially outwardly from the tool body 30; a tool operating member 33 projecting radially outwardly from the tool body 30; and a gripping rim (at 33 in Fig. 4. See Att. 1) that projects axially away from a side surface (Att. 1) of the tool operating member 33, wherein the gripping rim (Att. 1) forms an axially outermost surface of the entire tool.

Regarding claim 36, Fultz teaches a tool 20 for an axle bolt comprising a tool body 30; a plurality of splines 35 circumferentially disposed on and extending radially outwardly from the tool body 30; a tool operating member 33 including a gripping rim (Att. 1) projecting radially outwardly from the tool body 30; wherein the tool body 30 extends from a first side surface (Att.

1) of the tool operating member 33; and wherein a gripping rim (Att. 1) projects axially away from an opposite second side surface (Att. 1) of the tool operating member 33.

Regarding claim 37, Fultz teaches a tool 20 for a bicycle crank axle bolt, the tool comprising: a tool body 30; a plurality of splines 35 circumferentially disposed on and extending radially outwardly from the tool body 30; and a tool operating member 33 extending radially outwardly from the tool body 30; wherein rotation of the tool operating member 20 rotates the plurality of splines 35 on the tool body 30.

6. Claims 22-24, 26-28, and 35-37, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Fultz (US Patent No. 5,445,483) in view of Nagano'149 (EPO 0512149 A1 cited by Applicant).

Assuming *arguendo* that Applicant claims a combination of a tool and a (bicycle crank) axle bolt:

Regarding claims 22-24, 26-28, and 35-37, Fultz teaches the tool substantially as claimed. However, Fultz does not teach the tool in combination with the (bicycle crank) axle bolt.

Nagano'149 teaches the tool 9 in combination with the bicycle crank axle bolt 3 or 4 (id., col. 4, lines 13-44). The tool 9 comprises a tool body 12; a plurality of splines 12a circumferentially disposed on and extending radially outwardly from the tool body 12 and dimensioned so as to fit within the bicycle crank axle bolt 3 or 4; and a tool operating member 9a extending radially outwardly from the tool body 12 wherein rotation of the tool operating member 9a rotates the splines 12a on the tool body 12 to thereby rotate the bicycle crank axle bolt 3 or 4.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Fultz's tool in combination with the bicycle crank axle bolt in order to rotate the bicycle crank axle bolt as taught or suggested by Nagano'149.

7. Claims 22-24 and 26-28, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagano'149 (EPO 0512149 A1 cited by Applicant).

Assuming *arguendo* that Applicant claims a combination of a tool and a (bicycle crank) axle bolt:

Regarding claim 22, Nagano'149 teaches a tool 9 (Fig. 3) for a bicycle crank axle bolt 3 or 4 comprising:

a tool body 12 (Figs. 3 and 8);

a plurality of splines 12a evenly circumferentially disposed on and extending radially outwardly from the tool body 12 and dimensioned to engage a corresponding plurality of splines 11a or 10a disposed on the axle bolt 3 or 4; and

a tool operating member 9a projecting radially outwardly from the tool body 12; wherein the tool operating member 9a is axially thicker than the tool body 12 (Fig. 8).

wherein rotation of the tool operating member 9a rotates the plurality of splines 12a on the tool body 12 to thereby rotates the axle bolt 3 or 4.

Nagano'149 teaches the tool as claimed. However, the tool operating member 9a is axially thicker instead of thinner than the tool body 12.

To change the dimension of the tool operating member 9a such that it is axially thinner than the tool body 12 would have been a matter of choice in design since the claimed structure and the function it performs are the same as the prior art. *In re Chu*, 66 F.3d 292, 36 USPQ2d

1089 (Fed. Cir. 1995). See also legal precedents regarding “Change in Size/Proportion” in MPEP 2144.04.

It would have been obvious to one having ordinary skill in the art to change the dimension of Nagano’149’s tool operating member such that it is axially thinner than the tool body in order to rotate the axle bolt as a matter of choice in design.

Regarding claim 23, the tool operating member 9a has a disk shape.

Regarding claim 24, the tool body 12 extends from a side surface (see Attachment 2) of the tool operating member 9a.

Regarding claim 26, the tool operating member 9a includes a gripping rim (at 9a in Figs. 3 and 8. See Att. 2) extending from a side surface thereof.

Regarding claim 27, the gripping rim 9a is disposed at a radially outermost portion of the tool operating member 9a.

Regarding claim 28, the tool body 12 extends from a first side surface (Att. 2) of the tool operating member 9a, and wherein the gripping rim 9a extends from an opposite second side surface (Att. 2) of the tool operating member 9a.

8. Claims 35-37, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Nagano’149.

Regarding claim 35, Nagano’149 teaches a tool 9 for a bicycle crank axle bolt 3 or 4 comprising: a tool body 12; a plurality of splines 12a circumferentially disposed on and extending radially outwardly from the tool body 12, a tool operating member 9a projecting radially outwardly from the tool body 12, a gripping grim 9a that projects axially away from a

(first) side surface (Att. 2) of the tool operating member 9a, wherein the gripping grim 9a forms an axially outermost surface of the entire tool 9 as seen in Figs. 6-9.

Regarding claim 36, Nagano'149 teaches a tool 9 for an axle bolt 3 or 4 comprising: a tool body 12; a plurality of splines 12a circumferentially disposed on and extending radially outwardly from the tool body 12, a tool operating member 9a including a gripping rim 9a projecting radially outwardly from the tool body 12, wherein the tool body 12 extends from a first side surface (Att. 2) of the tool operating member 9a; and wherein the gripping grim 9a projects axially away from an opposite second side surface (Att. 2) of the tool operating member 9a (Figs. 6-9).

Regarding claim 37, Nagano'149 teaches a tool 9 for a bicycle crank axle bolt 3 or 4 that screws to a crank axle 5, 2, 1 wherein the crank axle 5, 2, 1 comprises a member 1 rotating as the bicycle is pedaled so that the crank axle bolt 3 or 4 attaches a crank arm 6a, 6b to the crank axle 2, 1 so that the bicycle crank axle bolt 3 or 4 and the crank arm 6a, 6b rotate with the part 1 of the crank axle 5, 2, 1 as the bicycle is pedaled, the tool comprising: a tool body 12; a plurality of splines 12a circumferentially disposed on and extending radially outwardly from the tool body 12 and dimensioned so as to fit within the bicycle crank axle bolt 3 or 4; and a tool operating member 9a extending radially outwardly from the tool body 12; wherein rotation of the tool operating member 9a rotates the plurality of splines 12a on the tool body 12 to thereby rotate the bicycle crank axle bolt 3 or 4. See col. 4, lines 13-44.

9. Claims 25, 29, and 30, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagano'149.

Regarding claims 25 and 29, Nagano'149 teaches a tool 9 for an axle bolt 3 or 4 comprising: a tool body 12; a plurality of splines 12a circumferentially disposed on and extending radially outwardly from the tool body 12; and a tool operating member 9a projecting radially outwardly from the tool body 12 and longitudinally immovable relative to the tool body 12; wherein the tool operating member 9a includes an outer peripheral surface/gripping rim.

Nagano'149 teaches the invention substantially as claimed. However, Nagano'149 does not teach the knurled outer surface/gripping rim of the operating member.

It is common knowledge in the art to knurl the outer surface of Nagano'149 in order to improve the gripping of the tool. The use of knurled outer surface is notoriously well known. See, e.g., the knurled outer surface 90 of USPN 4,545,691 issued to Kastan et al., or the knurled outer surface 14 of USPN 3,742,808 issued to Trembley.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to knurl the outer surface/gripping rim of Nagano'149 in order to improve the gripping of the tool as taught or suggested by common knowledge in the art.

Regarding claim 30, Nagano'149 teaches the invention substantially as claimed. However, Nagano'149 teaches a plurality of splines instead of eight splines.

It is common knowledge in the art to choose Nagano'149's plurality of splines to be eight splines in order to couple Nagano'149's tool with the axle bolt. The use of eight splines is notoriously well known (see, e.g., eight splines in the tool 7 of US Patent No. 5,852,954 issued to Yamanka). See *Sjolund v. Musland*, 6 USPQ2d 2020, 2026 (CAFC)(to change a plurality of panels to a single panel is obvious).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the number of Nagano'149's splines to be eight splines in order to couple Nagano'149's tool with the axle bolt as taught or suggested by common knowledge in the art. The use of eight splines would have been a matter of choice in design since the claimed structure and the function it performs are the same as the prior art. *In re Chu, supra.*

10. Claims 25, 29, and 30, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Fultz.

Regarding claims 25 and 29, Fultz teaches the invention substantially as claimed (see the rejection under 35 USC 102 based on Fultz above). However, Fultz does not teach the knurled outer surface/gripping rim of the operating member.

It is common knowledge in the art to knurl the outer surface of Fultz in order to improve the gripping of the tool. The use of knurled outer surface is notoriously well known. See, e.g., the knurled outer surface 90 of USPN 4,545,691 issued to Kastan et al., or the knurled outer surface 14 of USPN 3,742,808 issued to Trembley.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to knurl the outer surface/gripping rim of Fultz in order to improve the gripping of the tool as taught or suggested by common knowledge in the art.

Regarding claim 30, Fultz teaches the invention substantially as claimed. However, Fultz teaches a plurality of splines instead of eight splines.

It is common knowledge in the art to choose Fultz's plurality of splines to be eight splines in order to couple Fultz's tool with the axle bolt. The use of eight splines is notoriously

well known (see, e.g., eight splines in the tool 7 of US Patent No. 5,852,954 issued to Yamanka).

See *Sjolund v. Musland, supra*.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the number of Fultz's splines to be eight splines in order to couple Fultz's tool with the axle bolt as taught or suggested by common knowledge in the art. The use of eight splines would have been a matter of choice in design since the claimed structure and the function it performs are the same as the prior art. *In re Chu, supra*.

11. Applicant's arguments filed November 21, 2005 have been fully considered but they are not persuasive.

At the outset, Applicant argued:

Fultz discloses a clinch fastening nut used to fasten bolts to a metal sheet. As such, *Fultz fails to disclose or suggest a tool for a bicycle crank axle bolt*. There is no evidence that the plurality of splines (35) are dimensioned to engage a corresponding plurality of splines disposed on a bicycle crank axle bolt, wherein rotation of the tool operating member rotates the plurality of splines on the tool body to thereby rotate the bicycle crank axle bolt as recited in claims 22 and 37. Splines (35) are intended to nonrotatably couple the nut to a metal sheet, not to be used as a tool. *Fultz also neither discloses nor suggests a gripping rim that projects axially away from a side of a tool operating member as recited in claims 35 and 36, especially if flange (33) is interpreted to be a tool operating member.* (Emphasis added).

The Court has long laid Applicant's arguments to rest by pointing out that new use of old device is not patentable. See *In re Schreiber, supra*. Moreover, a single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation. *Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopedics, Inc.*, 976 F.2d 1559, 1565 [24 USPQ2d 1321] (Fed. Cir. 1992). Thus, a prior art reference without express reference

to a claim limitation may nonetheless anticipate by inherency. See *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349 [64 USPQ2d 1202] (Fed. Cir. 2002). “Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claims limitations, it anticipates.” *Id.* (quoting *MEHL/Biophile Int'l Corp. v. Milgram*, 192 F.3d 1362, 1365 [52 USPQ2d 1303] (Fed. Cir. 1999). Moreover, “[i]nherency is not necessarily coterminous with knowledge of those of ordinary skill in the art. Artisans of ordinary skill may not recognize the inherent characteristics or functioning of the prior art.” *Id.*; see also *Schering Corp. v. Geneva Pharms.*, 339 F.3d 1373, 1377 [67 USPQ2d 1664] (Fed. Cir. 2003) (rejecting the contention that inherent anticipation requires recognition in the prior art) (citing *In re Cruciferous Sprout Litig.*, 301 F.3d at 1351; *MEHL/Biophile*, 192 F.3d at 1366).

In the instant case, albeit Fultz does not expressly disclose or suggest a tool for a bicycle crank axle bolt, however, Fultz’s clinch nut 20 is capable to use as a tool for a bicycle crank axle bolt or the like 23 as seen in Fig. 1 of Fultz. Moreover, *Merriam-Webster’s Collegiate Dictionary, Tenth Edition, 1999*, defines “a tool” as “a handheld device that aids in accomplishing a task.” Since Fultz’ nut 20 clearly can be held by hand to aid in accomplishing a task such tightening the bolt 23 of Fultz, thus, it is a tool based on the customary and ordinary meaning of the term “tool.”

Second, Applicant argued that there is no evidence that the plurality of splines (35) are dimensioned to engage a corresponding plurality of splines disposed on a bicycle crank axle bolt, wherein rotation of the tool operating member rotates the plurality of splines on the tool body to thereby rotate the bicycle crank axle bolt as recited in claims 22 and 37.

It is well settled that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In this case, Fultz's nut 20 is substantially identical to Applicant's so-called "tool" in Applicant's Fig. 10, therefore, Fultz's nut 20 is capable to rotate the axle bolt by engaging the splines of Fultz's nut 20 with the corresponding splines of the axle bolt of the bicycle as seen in Nagano'149.

Third, Applicant contended that Fultz's flange 33 is not the gripping rim. Nevertheless, contrary to Applicant's subjective observation, Fultz discloses or suggests a gripping rim that projects axially away from a side of a tool operating member as recited in claims 35 and 36. Indeed, Fultz's gripping rim is substantially identical to Applicant's gripping rim 474 in Applicant's Fig. 10. One having ordinary skill in the art plainly can grip the outer surface of Fultz's flange 33 by his/her hand, thus, that outer surface "reads on" Applicant's gripping rim. Applicant apparently uses an "*ipsissimis verbis*" test that requires the same terminology in the art in order to find anticipation. See footnote 11 of *AKZO N.V. v. International Trade Commission*, 1 USPQ2d 1241, 1245 (CAFC 1986). It is well settled that an inventor can be his/her own lexicographer. Thus, Fultz does not need to use the same terminology as Applicant uses. Simply put, since one can grip the outer surface of the flange 33 of Fultz in the same manner as one can grip the rim 474 of Applicant, a fortiori, the outer surface of Fultz's flange 33 reads on the "gripping rim."

Fourth, Applicant averred:

Claim 37 has been amended to clarify that the tool is for a bicycle crank axle bolt that screws to a crank axle that rotates as

the bicycle is pedaled so that the crank axle bolt attaches a crank arm to the crank axle so that the bicycle crank axle bolt and the crank arm rotate with the crank axle as the bicycle is pedaled. Rotation of the tool operating member rotates the plurality of splines on the tool body to thereby rotate the bicycle crank axle bolt. Nagano discloses a tool (9) with a plurality of splines (12a) dimensioned to engage splines (10a) formed in a screw ring (3) that nonrotatably fastens an axle assembly to a bottom bracket (5) of a bicycle. *Such a screw ring (3) is much larger than the unnumbered crank axle bolt shown in Nagano's Fig. 2 and does not rotate as the bicycle is being pedaled.* Thus, Nagano neither discloses nor suggests the subject matter recited in amended claim 37. (Emphasis added).

As noted in MPEP 2111, during patent examination, claims are given their broadest reasonable interpretation consistent with the specification. It is proper to use the specification to interpret what the applicant meant by a word or phrase recited in the claim. However, it is not proper to read limitations appearing in the specification into the claim when these limitations are not recited in the claim. See *In re Paulsen*, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994); and *Intervet America Inc. v. Kee Vet Lab. Inc.*, 887 F.2d 1050, 1053, 12 USPQ2d 1474, 1476 (Fed. Cir. 1989). (Emphasis added). It is well settled that anticipation law requires distinction be made between invention described or taught and invention claimed. It does not require that the reference "teach" what subject patent application teaches, it is only necessary that the claim under attack, as construed by the Court, "read on" something disclosed in the reference, i.e., all limitations of the claim are found in reference, or are "fully met" by it. *Kalman v. Kimberly Clark Corp.*, 218 USPQ 781, 789 (CAFC 1983).

In the case at hand, one can interpret that Nagano's crank axle comprises elements 5, 2, and 1 of Nagano. In this case, the axle bolt 3 or 4 is screwed to the member 5 of the crank axle 5, 2, 1 as shown in Fig. 2. The rotation of the tool operating member 9a plainly rotates the

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plurality of splines 12a on the tool body 12 to thereby rotate the bicycle crank axle bolt 3 or 4 as seen in Fig. 3. Therefore, Applicant's claim 37 is "fully met" by Nagano.

Finally, the rejections based on Kanaan, Trembley, and Berecz are withdrawn in view of Applicant's amendment. Applicant's arguments regarding Kanaan, Trembley, and Berecz are moot.

For the foregoing reasons, Applicant's request to allow all claims is respectfully denied.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinh T. Luong whose telephone number is 571-272-7109. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley, can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Luong

January 31, 2006



Vinh T. Luong  
Primary Examiner

# **ATTACHMENT 1**



US005445483A

## United States Patent [19]

Fultz

[11] Patent Number: 5,445,483  
 [45] Date of Patent: Aug. 29, 1995

[54] FEMALE CLINCH FASTENER WITH  
 COLD-FORMED LOCKING FLANGE AND  
 ASSOCIATED INSTALLATION METHOD

[75] Inventor: Robb M. Fultz, Huntington, Ind.

[73] Assignee: Emhart Inc., Newark, Del.

[21] Appl. No.: 110,451

[22] Filed: Aug. 23, 1993

[51] Int. Cl. 6 F16B 37/04; B23P 11/00

[52] U.S. Cl. 411/181; 411/179;  
 411/183; 29/432.2; 29/525.2

[58] Field of Search 411/107, 179, 180, 181,  
 411/183, 177; 403/282-285; 29/432.2, 524.1,  
 525.2

[56] References Cited

U.S. PATENT DOCUMENTS

2,026,757	1/1936	Swanstrom	411/181 X
3,381,362	5/1968	Church et al.	411/181 X
4,018,257	4/1977	Jack	411/180 X
4,724,610	2/1988	Muller	411/179 X
4,810,143	3/1989	Muller	411/181
4,825,527	5/1989	Ladouceur	411/180 X
5,006,025	4/1991	Duran	411/177 X

## FOREIGN PATENT DOCUMENTS

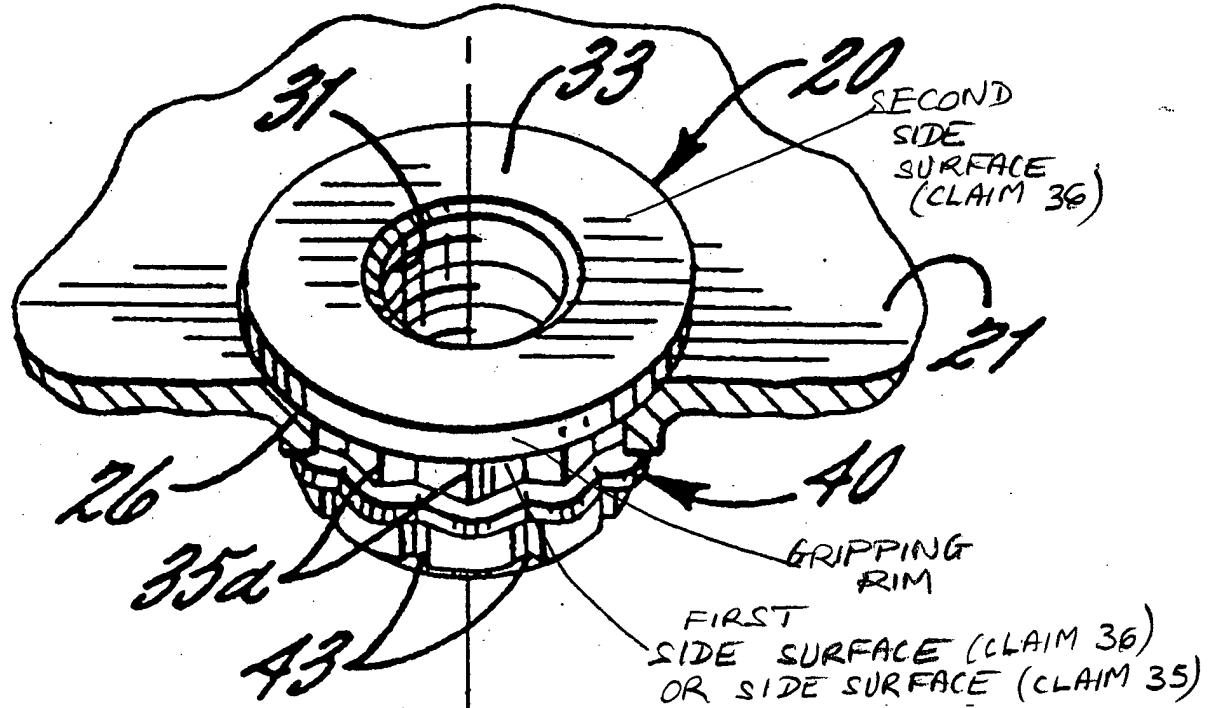
938490 10/1963 United Kingdom ..... 411/179

Primary Examiner—Neill R. Wilson  
 Attorney, Agent, or Firm—E. D. Murphy

## [57] ABSTRACT

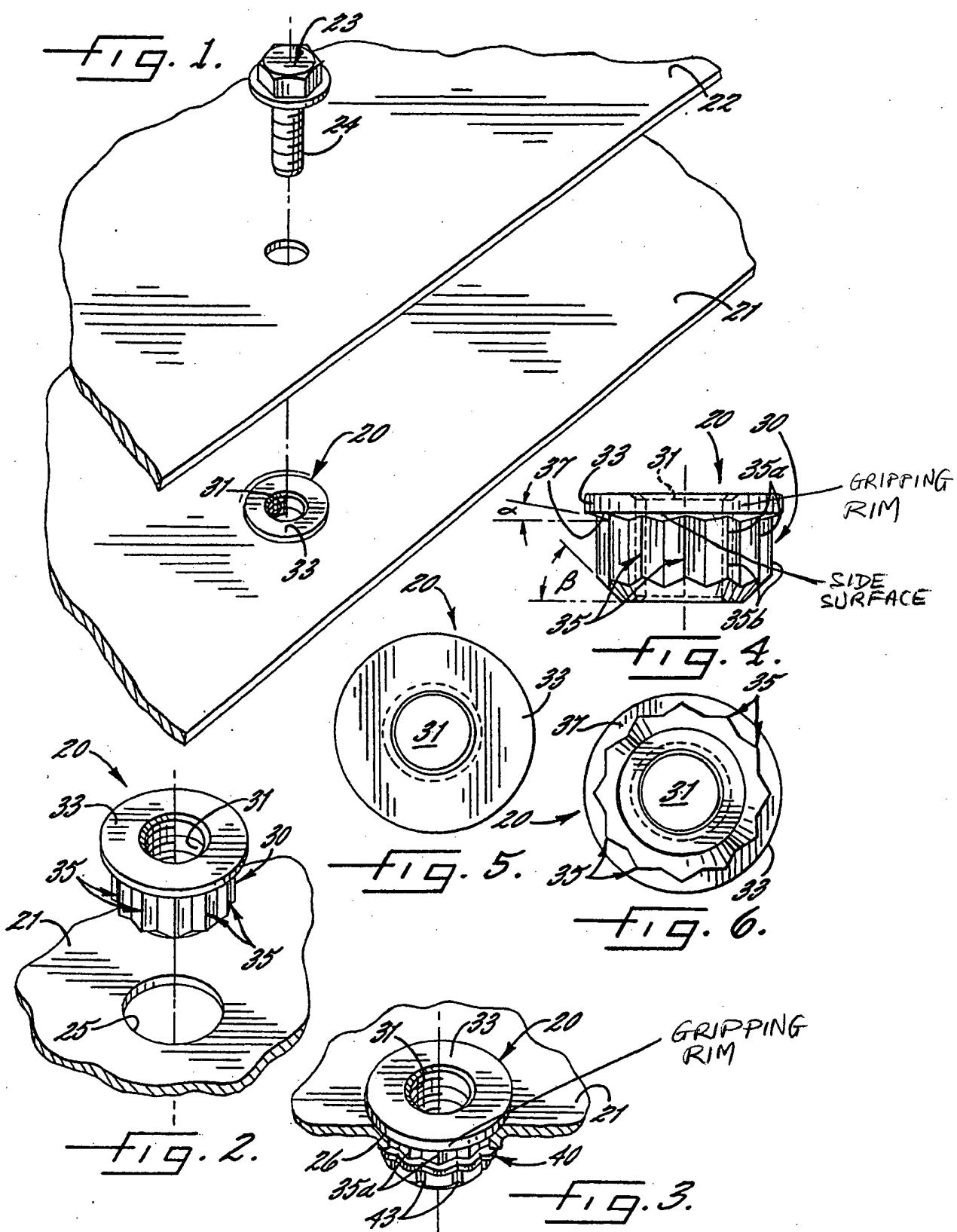
A female clinch fastener adapted to be secured to a sheet by cold-forming includes a generally tubular body having a plurality of circumferentially distributed splines. Longitudinally extending portions of the splines are adapted to be displaced by cold-forming or a peeling action to form a laterally extending flange along a medial portion of the tubular body. The clinch fastener also preferably includes a laterally extending flange at one end cooperating with the cold-formed flange to secure the fastener within a pilot, or collar, formed at an opening in the sheet to which the clinch nut is secured. The splines adjacent the end flange are also secured within the pilot of the sheet and prevent rotation of the clinch fastener. The tubular body also preferably has a second end portion being tapered to serve as a guide surface to facilitate alignment with an opening in the sheet during installation, and also serves as a guide surface for beginning the cold-forming, or peeling, of the splines to form the flange in the medial portion of the tubular body.

58 Claims, 3 Drawing Sheets



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## **ATTACHMENT 2**

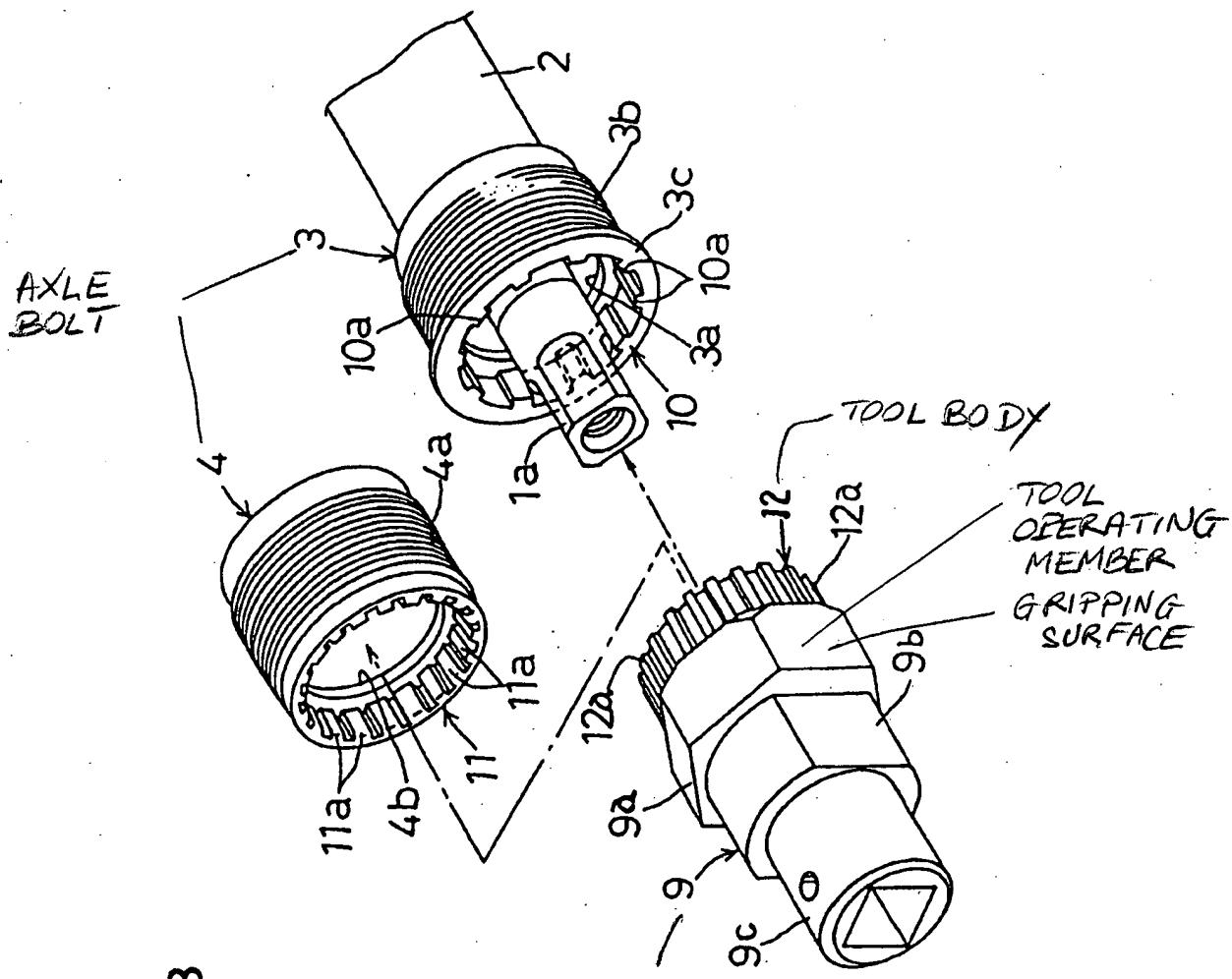


FIG.3

FIG.6

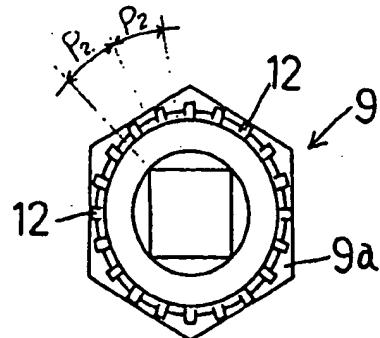


FIG.8

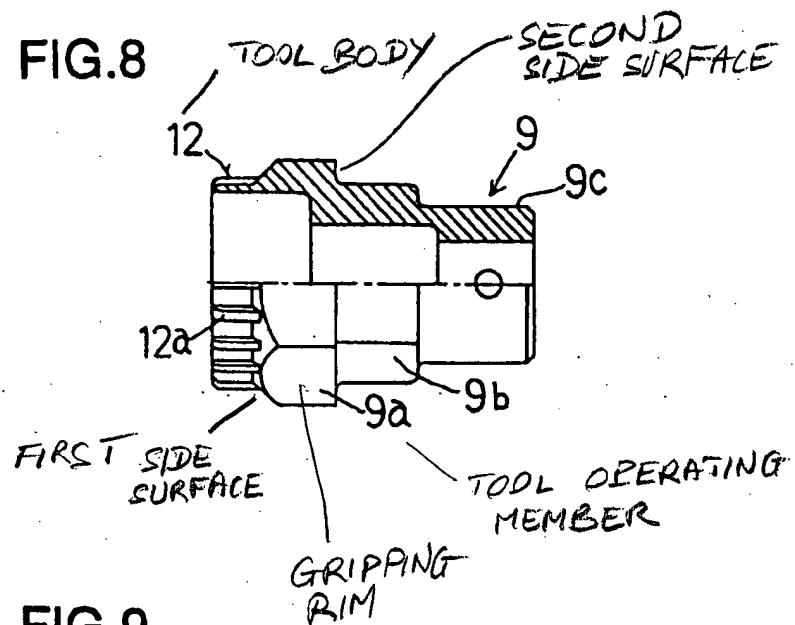


FIG.9

